



RF EXPOSURE REPORT

Applicant	:	Guangdong Hiway Integrated Circuit Technology Co., Ltd.
Address of Applicant	:	No.1 Headquarters, Songshan Lake High Technology Industrial Park, Dongguan City, Guangdong Province, Peoples republic of China
Manufacturer	:	Guangdong Hiway Integrated Circuit Technology Co., Ltd.
Address of Manufacturer	:	No.1 Headquarters, Songshan Lake High Technology Industrial Park, Dongguan City, Guangdong Province, Peoples republic of China
Equipment under Test	:	GY Sensor 2.0
Model No.	:	HW48414-SGY-110
FCC ID	:	2BLDF- HW48414
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE25070219-1E02
Issue Date	:	2025/11/21
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

Table of Contents

1. General Test Information.....5

1.1. Description of EUT5

1.2. Accessories of EUT5

1.3. Test laboratory5

2. RF Exposure evaluation for FCC6

2.1. Assessment procedure.....6

2.2. Assess result.....7

Test Report Declare

Applicant	:	Guangdong Hiway Integrated Circuit Technology Co., Ltd.
Address of Applicant	:	No.1 Headquarters, Songshan Lake High Technology Industrial Park, Dongguan City, Guangdong Province, Peoples republic of China
Equipment under Test	:	GY Sensor 2.0
Model No.	:	HW48414-SGY-110
Manufacturer	:	Guangdong Hiway Integrated Circuit Technology Co., Ltd.
Address of Manufacturer	:	No.1 Headquarters, Songshan Lake High Technology Industrial Park, Dongguan City, Guangdong Province, Peoples republic of China

Test Standard Used:

KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE25070219-1E02		
Date of Receipt:	2025/08/13	Date of Test:	2025/08/13~2025/09/27

Created: Jacky Huang	Reviewed: Johnson Huang	Approved: Damon Hu
		
2025/09/28	2025/11/21	2025/11/21

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2025/11/21	Damon Hu

1. General Test Information

1.1. Description of EUT

EUT Name	: GY Sensor 2.0
Model Number	: HW48414-SGY-110
EUT Function Description	: Please reference user manual of this device
Power Supply	: Button cell 3V
Operation frequency	: 433.92MHz
Modulation	: FSK
Antenna Type	: Steel sheet antenna
Max Antenna Gain (dBi)	: 2.15

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual.

1.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

1.3. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2. RF Exposure evaluation for FCC

2.1. Assessment procedure

Requirement:

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30
Note: f= frequency in MHz; *Plane-wave equivalent power density				

Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.2. Assess result

Mode	Output power (dBm)	Tune up power (dBm)	Tune up power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
433MHz SRD	-13.42	-13.00	0.05	2.15	1.64	0.00002	1

PK Output Power=81.78 dBuV/m @3m - 95.2= -13.42dBm

Please refer to the test report "DDT-RE25070219-1E01"

Conclusion: MPE evaluation required since transmitter power is below FCC threshold.

-----End Report-----